



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

5

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,511	06/24/2002	Yasutaka Ito	220253US2PCT	9667

22850 7590 09/22/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
----------

FUQUA, SHAWNTINA T

ART UNIT	PAPER NUMBER
----------	--------------

3742

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/069,511	ITO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shawntina T. Fuqua	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-4, 7, 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3/12/04</u> . | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4, 7, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurko in view of applicant's admitted prior art.

Hurko discloses a ceramic heater comprising a ceramic substrate (10) and a resistance heating element (12) formed on the surface of the ceramic substrate (column 3, lines 41-45), wherein irregularities are formed on the side face of the resistance heating element (Figure 1, column 6, lines 16-24) and the heating element is formed to be drawn as a curve (Figure 1).

Hurko does not disclose a ceramic substrate of carbide or nitride and irregularities 100 micrometers or less. Applicant discloses a ceramic substrate of carbide or nitride (specification, page 1, lines 20-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a carbide or nitride ceramic substrate as disclosed by applicant in the ceramic heater of Hurko because, carbide or nitride ceramic substrates are good conductors of heat and can withstand very high temperatures. In addition, Hurko in view of Applicant discloses the claimed invention except for irregularities 100 micrometers or less. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included irregularities 100 micrometers or less, since it has been held that where the general

conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hurko in view of Applicant's admitted prior art as applied to claim 1 above, and further in view of Natsuhara et al (US6548787).

Hurko in view of Applicant's admitted prior art discloses all of the recited subject matter except a heating element formed by sintering metal particles. Natsuhara et al discloses a heating element formed by sintering metal particles (column 4, lines 31-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included sintering the heating element from metal particles as taught by Natsuhara et al in the ceramic heater of Hurko because, a sintered heating element of metal particles allows the heater to heat more uniformly.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hurko in view of Applicant's admitted prior art as applied to claim 1 above, and further in view of Murase et al (US4883947).

Hurko in view of Applicant's admitted prior art discloses all of the recited subject matter except an insulating layer. Murase et al discloses an insulated layer (column 2, lines 43-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the insulated layer of Murase et al in the ceramic heater of Hurko because, an insulating layer protects the heat element.

*Response to Arguments*

5. Applicant's arguments with respect to claims 1, 3-4, 7, and 9-12 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

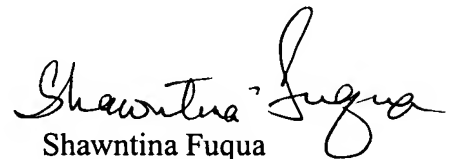
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawntina T. Fuqua whose telephone number is (703) 305-2581. The examiner can normally be reached on Monday-Friday 8-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (703) 305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

stf  
September 20, 2004

  
Shawntina Fuqua  
Patent Examiner  
Art Unit 3742